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AND

FRIEND OF KNOWLEDGE;

A QUARTERLY JOURNAL OF
HISTORICAL AND NATURAL SCIENCES, USEFUL KNOWLEDGE, &c.
WITH FIGURES.

BY C. S. RAFINESQUE,

Professor of Historical and Natural Sciences, Member of many learned Societies in America and Europe, Author of many Works, &c. &c.

Knowledge is the mental food of man.

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Article 130.

EPIDERMIC VARIETIES OF MANKIND.

These varieties in the skin of men are now known to be so numerous, that they require a classification: the name of *Albinos* often given them, not applying except to a few. They are all *Natural deviations* in the tissue and color of the skin, extending also to the hair and eyes; occasionally evolved in all the parts of the world, and springing from parents of a different hue.

First Series. ALBINIC VARIETIES or Natural Deviations, by bleaching the skin and hair, or passage from dark to paler or whiter complexions. *True Albinos.*

1. Var. *Lactins.* Skin milk white, hair white, silky, eyes often red and weak.

2. Var. *Albins.* Skin white or bleached, neither florid nor milky, hair bleached or grey and silky, eyes blue or whitish.

3. Var. *Palins.* Skin pale or brownish (like coffee and milk), hair rufous or ashy, eyes slaty or redish.

4. Var. *Scalins.* Skin white scaly, cheeks florid, hair pale silky, eyes blue and weak. *In Polynesia.*

5. Var. *Quimos.* Skin pale tawny, hair pale, short, wooly, eyes pale, dwarfish body, long arms, &c. In *Madagascar.*

Second Series. MELADIC VARIETIES, or Natural Deviations by mixture of dark and pale colors. *Spotted Men.*

6. Var. *Meladins.* Skin half white or pale, and half brown or black, hair and eyes variable, little deviated.

7. Var. *Pintados.* Skin with brown or black spots in the white race, pale or white in the black race, hair silky, and often small eyes.

8. Var. *Lividins.* Skin with irregular spots of a livid red color, called birth spots, or bloody spots; not a disease,

but a natural epidermic deviation.

9. Var. *Lenticulins.* Skin more or less covered with small lenticular spots of a rufous or brownish color, hair redish, eyes grey or rufous. Not uncommon with us, and seen also by Labillardiere among the Albinos of Papua.

Third Series. OBSCURIC VARIETIES, or Natural Deviations by darkening the skin and hair, or passage from white and pale to obscure and darker complexions.

10 Var. *Fuscatins.* Skin brown, hair crisp, eyes black. Common.

11. Var. *Atrins.* Skin wholy blackened, hair curly, eyes dark or black. Happening among white men.

12. Var. *Rubrins.* Skin wholly redened, as seen by Lander, among the Negroes in Africa. *C. S. R.*

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131. COMPLEXIONS OF MANKIND, &c.

It appears that there are men of every color, except blue and green! such as, 1 Milk white, 2 Pale white, 3 Florid white or Rosy, 4 Bedish, 5 Red, 6 Tawny, 7 Brown, 8 Brownish, 9 Yellowish, 10 Olivaceous, 11 Coppery, 12 Grey, 13 Ashy, 14 Coffee and milk, 15 Rusty, 16 Sooty, 17 Chocolate, 18 Black, 19 Ebony, 20 Spotted, &c.

All these colors and hues are found in America as well as in Africa, Asia, Polynesia, and even Europe. They are no wise permanent, but are liable to vary, fade, blacker or darken, disappear and reappear!

Thus facts and experience evince how idle have been the systems and disputes on these colors and on Negroes. It is now doubtful even what is a Negro! Since there are presumed Negroes of all colors and hues, with wooly or long and silky hair, ugly and handsome features, &c.

The size of mankind varies from 2 feet in dwarfs to 8 feet in giants, the usual size from 4½ to 6 feet.

The features and limbs vary every where, even in the same families. Some white men have thick lips and flat noses, while some black men have sharp noses and thin lips.

The color of the hair is of all colors except blue and green; as the skin, it varies in the same families, as well as the texture silky, lank, wavy, curly, frizzled, spiral, wooly, lumpish, &c.

The eyes are of all colors, not even excepting blue and green. I have seen a family where seven colors were found; blue, green, grey, brown, hazel, black, and mixt.

Let us learn to pause before we form opinions out of a few facts. Truth can only be detected by extensive observations. Respecting mankind the result of those made all over the world demonstrate that man is a variable being, like every other, and subject to the ETERNAL DIVINE LAW OF PERPETUAL CHANGE AND

MUTATION, in form size and complexion as well as manners and improvements. Whence we ought to love each other whatever be our shape, bulk and hue, as brothers of a single great family.—

Each Genus of Animals and Plants is also a similar family, with few or many old deviations which we call species, and varieties, at random! It is so with the dogs and cats, goats and mice, hawks and sparrows, ducks and gulls,—frogs and turtles,—herrings and carps,—flies and moths, &c. among animals.—And oaks, vines, apples, cherries, roses, lilies, rice, barley, wheat, gentian, spunges, &c. among trees, shrubs, flowers, and plants.

Whence genera are of more importance than species, and ought to be closely studied or accurately fixed; but we are far from this as yet; species have been too much attended in preference. But genera are not few, many thousands of new ones exist as yet, since almost every genuine or primitive species will be found to constitute a peculiar genus.

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132. Affinities of the English Language with the African Languages and Dialects of Egypt. &c.

Extract from my Philosophy of the English Language.

In Africa a great obscurity prevails on the subject of Philological and ethnological classification, nearly equal to the American perplexity. We know but few of the primitive languages of that continent; but among the modern we find dialects of several languages widely spread across the whole of Africa, and each offering striking analogies with the English, even among the Negro nations.

I shall enumerate the African languages under 3 classes. 1 Ancient African languages. 2 Languages of the Brown nations. 3 Of the Black or Negro nations.

I. Ancient Languages of Africa.

Those of which I can offer comparative tables are merely 1 Coptic. 2 Ammonian. 3 Lybian, and 4 Guanche.

1 Lang. *Egyptian or Coptic.*

This was the language of ancient Egypt, already spoken 4500 years ago, and which became extinct only towards 1620. But we have many books, inscriptions, and manuscripts in that langnage. It has considerable analogies with the Pelagian, Scythian, Sanscrit, and primitive dialects of Asia and Europe. It extended to Nubia, Abyssinia, and part of Lybia, in many dialects, 3 of which prevailed in Egypt. 1 The Theban, 2 the Memphitic or Northern. which changed P into PH or F, and K into Kh or X, 3 the Bashuric, changing R into L.

The primitive Phonology of Coptic, was very simple. It had only 12 letters, which were often diphonous or polyphonous—3 vowels, A, O or U, E or I, the simple consonants

were B, M, N, S, the polyphonous D, T, Th—G, K, X—R, L—P, F, and the aspiration H. But in the later times the Coptic adopted several Greek and Hebrew letters, some dipthong vowels, so as to increase the alphabet to 30 letters, which were represented by many signs and symbols called Demotic or popular, hieratic or sacred, and hieroglyphical or symbolical.

This language like all primitive ones, was entirely monosyllabic. The modern languages connected with it are many all over the world, and even in America; their roots may often be found in it.

From 252 Coptic words, collected at random for comparison, I find 83 more or less alike with the English, or about 32 per cent. A very great and striking quantity for such remote languages, one nearly primitive and extinct, the other of very late formation; therefore the parents of the English must have been still further connected with the Egyptians.

N. B. I add some French and Italian affinities, Greek and Latin analogies.

Eng. writ.	spoken.	*Coptic.*
Eagle pr Igl		*Akom*
aquilu Latin Italian.		
Lion	layon	*laboi*
Moist		*mou* (water)
Ray	re	*re* (sun)
Human	yumen	*rome* man
homo Latin.		
Oxen	oksen	*ehenue*
buoi Italian.		
Ass	donkey	*Io*
asino, cucio It. D.		
Cat	kiat	*chau*
chat pr Sha fr.		
Frog		*crous*
grenouille Fr. gr'nulh' Fr.		
Mouth	mouth	*ebot*
bouche, bush Fr. boca It.		
Woman	vumen	*hime*
Female	fimel	*shi*
She	shi	
femme fam Fr.		
femina It.		
Sister		*set*
House	haus	*ei*
Cabin		*kipe*
huis, old Fr. Casa It.		
capana It. cabane Fr.		
Soul	sol	*ahe*
Animate	animet	*ame*
ame, am Fr. anima It.		
Abode	ebod	*abot*
habitation, abitasion Fr.		
Life	laif	*aiha. bia*
Live	liv	*ahi*
bios Gr.		
vie Fr. vita It.		
Rush	rosh	*oke*
jonc Fr. junco It.		
Tear	tir	*rime*
lagrima It.		
Son		*si*
fils fis, Fr.		
Egg		*sowe*
uovo, It.		
Cow	kau	*bahsi*
vach' Fr. vacca It.		
Seed	sid	*siti*
Voice	vois	*wo*
voix, vua Fr. voce, voshe It.		
Mother		*mau*
madre It.		
Heart	hart	*het*
Merit	mai	*meros*
beloved, aime, eme Fr. ami, It.		
Boat	bot	*baa*
bateau, bato Fr. barca It.		

Fowl faul *halet*
volaille, volalh' Fr.
Be bi *pet*
etre F.
Horse hors *htor, htxo*
Canto, or song *cahos*
canto It.
Divinity, deity *noyti*
Heaven hevn *neifui*
Old *hello*
vieux, vielle, viœ', vielh' Fr.
Summer, somer *som*
River *iaro*
rio It. Sp
Head hed *ape*
capo It. Sp.
Morn *chorn*
giorno, djiorno It. day.
Foot fut *fat*
Bone *kas*
os Fr. costa It rib
Net or seine, sen' *chne*
seine Fr. pr sen'
White vuait *wouah*
Wood vud *woh*
bois, bua Fr.
Steel stil *stali*
Aliment *wen*
mange, mang' Fr.
No an
non Fr. an Gr.
Froc, dress *frok*
froc Fr.
Love lov *loblu*
Middle midl *miti*
meta It.
Mean min *mini*
Root rut *ruti*
Air er *aer*
aer Lat. aria It.
Fruit fruit *utah*
frutta It.
Meridional, south, *meri*
Stole hol *kohl*
Pledge pledj *dreb*
are Fr. capara It.
Hall *aule*
aule Gr.

Yet *eti*
eti Gr.
One uan *ua*
Sow sou } *eshau*
Swine swain }
Tall *thal*
Dumb domb *thom*
muto It.
Cott, cottage *kot*
Lick *legh*
Him *mim*
Monument *m'iau*
Wish *wesh*
Free fri *remhe*
eremos Gr.
Sapient (wise) *sabe*
Six siks *sohu*
sei It.
Save sev *sot*
sauve, sov Fr.
Frost (winter) *fro*
Shift, change *shibti*
change, chanj Fr..
Four fuer *Ftohu*
Enough enof *enough*
Job, work *hob*
opera It. obra Sp.
Calm kiam *gham*
Camel *ghamul*
Royal *raoh*
Cave (kev. tabernacle) *thebi*
caberna Sp.

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133. *Sorex dichrurus*. N. Sp. of Shrew.

I discovered this new small quadruped, in 1826, at the falls of Niagara; it had been caught even on Goat Island, in the middle of the falls, and preserved in the Museum of the Falls. It must dwell both in Canada and New York, but is rare, not having seen it elsewhere.—The specific name, means tail bicolored.

Sorex dichrurus. Raf. Fulvous, back brown, belly white, tail longer than body, nodose, with a pencil of hair at the tip, fulvous above, white beneath.

Small animal, similar to a mouse, and to some sp. of *Gerbillus*. Body 3 inches long, tail slender, 4 or 5 inches, head slanting, and elongated, snout sharp, eyes oblong, ears small oboval.

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134. Florula Texensis. Dicotyl. N. Sp.

New Dicotyle Plants of Texas & Arkanzas, in my Herbarium.

1. Nudilus N. G. Raf. Dioicus. Fl. masc.---Fl. fem. Cal. & Cor. o. Pist. ovat. Styl. longus, stigma capit. Bacca 1 sperma. *Frutex fol. opp. s. alt post anthesis. fl. fascic.* Singular G. near to *Borya* and *Ilex*. —*N. paradoxus.* Raf. Ramis teretis nudis levis, fol. lanc. sessil. glabr. acut. integr. fasc. alt. Fl. parvis pedic. racemosis s. 2–4nis. Flowers naked small vernal. From Texas to Tennessee, very rare, seldom seen in blossom, berries ovate black.

2. *Lobelia texensis Raf.* Puberula, Caule flex. simpl. Fol. sess. lanc. dentic. acutis remotis, Fl. racem. secund. remotis, ad bract. lanc. axill: ped. fl. & bract. brevior, Cal. lac. linear. Cor. magna coccinea, lac. angust. acutis. Beautiful sp. near to *L. cardinalis*, and *L. Fulgens. v. v.*

3. *Pentostemon atropurpureum* Raf. Caule virg. simpl. ter. Fol. ang. lanc. amplexic. serrul. glabr. acutissim. Fl. racem. bracteis ovat. lanc. acum. integris. Pretty sp. with small fl. dark purple, *v. v.*

4. *Gratiola brevifolia* Raf. Glabra simplex, Fol. breviss. ovatis acutis integris remotis, Fl. axill. ped. fol. longior, Cor. incurva. small 4 in. fl. small purplish.

5. *Gratiola rigida* Raf. Glabra, rigida, Caule anceps. Fol. rhomboideis, basi cuneatis integris, apice serratis obtusis, Pedic. angul. fol. longiorib. Cal. sine caliculo.—Fine sp. lacking the 2 bracts, Cal. deeply 5 parted, segm. linear lanc. unequal, one superior broader, caps. oblong acute. Probably a peculiar S. G. *Aotilix* Raf.

6. *Lantana parvifolia* Raf. Ramis Virgatis obt. angul. apice puberuli, Fol. oppos. petiol. ovato-obl. parvis, crenatis, subacut. supratransv. rugosis, subtus tomentosis, Capitulis fol. brevior, paucifloris, bracteis imbricatis ovatis integris. —Small shrub, very distinct from *L. floridana & L. camara.* Sea shore *v. v.*

7. *Nyssa ciliata* Raf. Fol. ovat. obovatisque, integr. utrinq. acum. ciliatis, petiolis nervisq. basi hirsutis. Pedunc. fem. trifloris hirsutis, bract. brev. membr. obt. fl sessil. Stylo elong.—Different tree from N villosa.

8. *Negundium trifoliatum* Raf. Ramulis viridis levis, Fol. trifol. ovatobl. glabr. acut. integris, media sepe tridentata, Fl. dioicis masc. 4 andris, cal. 4 dent. pedic. fascic. filiformis, fl. fem. racemosis, cal. 4 part.

linear. pist. bipart. incurvis forceps emulans, stylis in forceps. *v. v.*

9. *Celtis longifolia* Raf. Ramulis gracilis verrucosis, apice hirsutis. Fol. distichis, elongato oblongis acum. basi obliq. truncatis, equal. serratis, supra scabris, subtus reticulatis, pedic. solit.

10. *Fagus rotundifolia* Raf. Ramulis fuscatis levis. Fol. Subrotundis repandis acutis, petiolis nervis marginiq. hirsutis sericeis. Capitulis sepe geminatis, ped. bracteisq. sericeis.—Differs from *F. sylvatica* by the round repand leaves &c.

11. *Euphorbia (Esula) leucoloma* Raf. 1820. Glabra, Caule erecto fol. sessil. obov. acut. integr. Umb. trifid. bract. fol. similis marg. albo colorato, Periantho apice albo 4 lobo, capsulis villosis.—Var 1 *Simplex*, 2 *Elatior*, 3 *Cuneifolia*, autumnal plant. *E. marginata* of some Bot. not of Kunth. v. v.

12. *Achillea gracilis* Raf. Caule gracile striato, Fol. remotis angustis, infimis petiol. recurvatis, pinnatis, foliol. ang. pinnatif. corymbo] parvo coarctato. Semipedal, fl. white.

13. *Fedia brevifolia* Raf. Caule gracile furcato, fol. remotis paucis brevis, spatul. obl. obt. integr. Fl. paucis geminatis, bracteis ovatis acutis, seminib. 4 dentatis—semipedal.

14. *Polemonium quadriflorum* Raf. Caule erecto ramoso, Fol. pinnatis, foliolis 11-17 ovatis s. obl. acut. integr. ultimis confluentibus, Fl. term. sub 4nis. nutans pubescens blue.

15. *Glechoma rotundi folia* Raf. Repens, hirsuta, fol. longepetiol. subrotundis ovatis, repando crenatis.

16. DIDIPLIS N. G. Raf. Cal. camp. 4 fid. Cor. 0. stam. 2. stigm. 2. caps. biloc. polysp.—*D. linearis* Raf. Caule erecto, fol. oppos. linear. elongatis integris. fl. axill. ses. solit.—*Peplis diandra* Nutall in Dec. Quite a distinct G. from *Peplis* 6andr. G.

17. EUTMON N. G. Raf. Cal. 5 phyl. eq. cor. 5 pet. stam. 5 alterna styl. 1, stigma 3 lob. caps. 1 loc. 3 valv. polysp. sem. centralis. *E. napiforme* Raf. Rad. tuberosa, fol. rad. teretib. carnosis, cyma corymb. dichotoma, *Talinum* s. *Phemeranthus napiforme* Dec. My specimen from a garden is imperfect, but evidently shows that it is a N. S. *v. v.*

18. *Convolvulus griseus* Raf. Volubilis, fol. longepetiol. cordatis subtrilobis, 3 nervis, denticulatis, acutis, puberulis furfuraceis griseis. Pedic. brevis unifl. Cal. griseus, bracteis binis lanceol. caliculans. Near S. G. *Calistegia.*

19. DESMONEMA N. G. Raf. Perianth. ext. tubul. 5 dent. s. 5 phyl. segm. connivens. Perianth-intern. petaloid. 5 segm. membr. ad ext. brevior, cuneat. emarg. Stam. plurima ad bas. gynophoro inserta, equalis, fascicul. albis filif. vix articul. persistens, simultaneis evolvens, interdum castratis, anth. parvis deciduis. Gynophoro centrale elongato trigono, stam. & cal. longior. Ovar. glabr. glob. apice trilobo, stylis 3 simpl. brevi. Caps. levis 3

cocca 3 sp. Int. axis centralis 3 alato persist. Coccis deciduis, seminib. croceis obovatis. basi truncat. hilo impressis, latere utrinq. angul. *D. hirta* Raf. 1820. Caule erecto simpl. gracile striato scabro, apice hirto, Fol. oppos. apice alt. petiol. hirtis, ovatis obtusis, obt. dentatis, imis ov. lanc. acum. Umbella term. sessil. fl. brevi ped. Involucro triphyl. fol. simil. s. sessil. bract. lanceol. fl. mixtis. Per. ext. s. cal. viride. Per. int. & stam. albis.—Pedale. *v. v.* I have destroyed all my specimens except one to study this singular G. which is very near to *Euphorbia* and *Tragia*, here the Cor. or ext. Per. is free not glued with the external, Stam. persist thus illustr. their structure.

20. *Evax verna* Raf. Canescens sericea, Caule gracile subramoso Fol. laxis semiamplex. obl. obtusiusc. infimis cuneatis, Fl. solit term. bract. ineq. fol. similis, periantho semiglob. squamis paucis subrot.—Texas & Louisiana, triuncial, fl. white, floscules greenish.

21. *Silphium trachopus* Raf. Caule tereto lutescens glabro ramoso, Fol. oppos. amplex. ovatobl. acut. s. acum. integr. scabris, Fl. corymb. ped. scabris. Perianth. segm. ovatis acutis non ciliatis, rad. 20. obl. obt.—Fine sp.

22. *Chrysanthemum angustifolium* Raf. Caule filif. flexuoso, apice nudo fol. infimis lineari cuneatis subserratis, imis linearib. integris remotis, fl. term. solit, parv. 8 radiatis albis.—Pedal slender, with small white flowers.

23. *Kernera Simplex*, Raf. glabra, caule simpl. fol. lanc. sagitt. amplex. obtus. imis linearib. non sagitt. racemo brev. fl. nutant. ochroleucis.—Semipedal, annual. I adopt the old G of Medic for the Camelina of later Botanists.

Nov Plant. Texensis, &c.
Monocot.

24. *Cypripedium bifidum* Raf. Glabrum, caule 1fl. fol. fl. longior, obl. long. acum. bractea lanc. fl. longior. Petalis undul. lanc. patulis, binis internis reflexis angustis, labellum parvus brevior obov. infl. Androphorum bigibboso obtuso bifido.—Small plant flower probably yellow, brown in the dry state, leaves 4 to 5 inches by 1 or 2, striate multinerve. Arkanzas.

25. *Sisyrinchium filiforme*. Raf. Glaucum Caule filif. bialato, unifolio, unifl. folia fl. eq. graminea august. carinata, spatha bivalv. subeq. lanceol. pedunc. elongato filif. ovar. obov. fl. majusc. albo.—Semipedal Arkanzas.

26. *Acorus flexuosus* Raf. Pumilus, fol gramineis angustissimis scapo brevior scapo elongato flexuoso triqueter, uno latere concavo, apice foliaceo gladiato, spica teres erecta obt.—Pedal.

27. *Unisema lancifolia* Raf. Fol. ellipt. s. obl. lanc. basi integr. rotund. s. atten. apice subacut. caule gracil, Corollis linearib. The *Pontederia lanci-*

folia Mg. and Elliott. different from my U. heterophylla by leaves never cordate at base nor obt. at end *v. v.*

28. *Iris brevicaulis* Raf. fl. ludov. sp. 56. *v. v.*

29. *Etheosanthes ciliata* Raf. Neog. 1825. *v. v.*

30. *Tulipa bicolor* Raf. Atlantic Journal N 4. *v. v.*

This fascicle of rare S. W plants contains 4 N. G. 1 S. G. 4 New trees, 2 new shrubs and 24 new plants. Several others will be mentioned in the Monographs of revised Genera.

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135. *G. Dodecatheon* or *Meadia.*

This beautiful G. strictly N. Amer. although Langsdorf mentions one seen in Siberia. will be found as numerous as *Primula!* there are many Sp in Oregon and one has been found by Beechey near the Icy Cape; the following 12 Sp. of the U. St. are in my Herbarium It may now be a matter of doubt which is the true *Meadia and Integrifolium*, many of my Sp. are under those names in authors figures Herbals and gardens; although different plants! All rare vernal plants,

1. *D. cordatum* Raf. Fol petiol. cord. ovat. obliq. sinuato lobatis, obt. lobis ineq. dentat. Scapo angulato, umbella 20fl bract. ovat. pedic. ineq. flex, laxis, Cor. planis obtus. purpurasc. Sent me as *D. meadia* from a garden, totally different, beautiful, large leaves and flowers.

2. *D. ellipticum* Raf. Fol. sessil. ellipt. obl. acutiusc. subrepandis, scapo tereto striato apice anceps, umbella paucifl. 8fl. bract, lanceol pedic laxis curvis, cor. planis. obt. albis. mountains Alleghany Virg. *v. v.*

3. *D. ovatum* Raf. sessil. ovatis obtus. basi attenuatis, vix repandis. Scapo tereto, umbella multifl. 20fl. bracteis minimis lanceol. pedic fastig, rectis. Cor. acutis undul. angustis purpureis.—Mountains Unakaand Apalachian. *v. v.* in gard. as *D. meadia.*

4. *D. obovatum* Raf. Fol. petiol. obovatis obtusis vix repandis, scapo tereto apice compr. Umbella laxa multifl. 20fl ped curvis Cor undul. obtus. purpureis.—Virginia. *v. v.*

5. *D. Serratum* Raf. Fol. petiol. obl. lanc. obtusis basi cuneatis subserratis, apice remote denticul. Scapo tereto, uno latere sulcato, Umb. paucifl. 8fl. fastig. bract, ov. lanc. Cor. undul. albis. Illinois. *v. v.*

6. *D. parvifolium* Raf. Fol. petiol. cuneatis obl. obt. integr. s. undul. parvis scapo tereto, Umb. paucifl 8fl. bracteis oblongis obtus. ped. curvis, Cor. planis obtus. albis—mts. Cumberland *v. v.*

7. *D. undatum*. Raf Fol. sub. petiol. cuneatis obtusis undatis. scapo tereto, umbella paucifl. bract. ovato lanc. Cor. undatis purpureis.—Mts. Alleghany.

8. *D. Cuneatum* Raf. Fol. sessilib. cuneif. acutis vix repandis, scapo tereto, Umb. fastig. paucifl. 5-7fl. bract. obl. acut. Cor. undul. purp. —Allegh. mts. of Maryland,

v v. Is it the real *D. integrif?*

9. *D. longifolium (S. angustifolium)* Raf. Fol. petiolatis pet. alatis, cuneatis elongatis obtusis integerrimis, scapo tereto apice compr. Umbella fastigiata multifl. 10--20, bract ovatobl. Cor. planiusc. obt albis----Barrens of Kentucky, leaves sometimes pedal. *v. v*

10. *D. crenatum* Raf. Fol sessil. oblong. obt subcrenatis scapo tereto, Umb. laxa paucifl. bracteis brevissim. subovat. Cor. undul. acut. purpurasc Cal. latinsc. Caps. ovatis Illinois, *v. v.*

11. *D flexuosum (S. triflorum)* Raf. Fol. subpetiol. cuneatis obt. integris parvis, scapo gracile flexuoso striato, Umb. subtriflora. bract. subul. pedic. brevis, Cor undul. acut, purpur, Caps obl.---Missouri, semipedal.

12 *D. uniflorum* Raf. Fol. sessilis lato ellipt. obt. vix. repandis, scapo filif. brevis striato. unifloro, bractea obl. acutis Cor. undul. acut. purpurasc.—M. Alleghany. *v. v.*

I have early in April this year discovered in Bartram's Bot. Gard. 2 other New Dodecatheons deemed Varieties of D. Meadia

13. *D. Parviflorum*, R. diff. from *D. flexuosum* by Fol. sessil. spatul. repand. scapo recto, fl. parvis. Found in Pennsylvania, near Norristown on the Schuylkill.

14. *D obtusum*, R. diff from *D. ellipticum* by Fol. undatis apice rotundatis margine obscure subcrenul. Scapo tereto levis, umbella 10–12fl. bract. ov. lanceol. From Arkanzas, brought by Nuttall as a white var. of *D. meadia.*

136, *New Amer. Subterranean Plants.*

These are chiefly of the class of Fungi. and are called Truffles or Tuckahos, belonging to the G. *Tuber, Sclerotium* chiefly. The *Tubers* or Truffles, grows freely under ground, the *Sclerotiums* or Tuckahos grow there attached to the roots of various trees and plants,

I shall not notice here the other plants growing in caves and clefts, but merely the real *Hypogean* plants. Their history is very confuse as our Botanists have seen few of them, Mitchell, Mease and Macbride have given accounts of some, deeming them all Truffles. This perplexity is increased by the name Tuckaho, a generic Lenapian name for them and all edible roots, deriving from *Tuchai*, their word for bread or bread roots. This word is now used as a nickname given in Virginia to the Lowlanders, called *Tuckahos*, as if they were root eaters.

It is doubtful yet whether we have the true odorous and delicicus *Tuber cibarium* of Europe. Eaton has it, but no Botanist has described it. Schweinitz has no *Tuber* in his fine work on 3098 sp. of Amer. Fungi. I have never seen it. nor indeed any real Truffle (veiny inside) although I have heard of many, which

might be of different G. Bosc, has mentioned one from Carolina, which he has hardly described, it is white, inodorous, but of exquisite taste, and may be called T. *caroliniana*.

His N. G. *Uperhiza*, omitted by all our Botanists! is figured and described in the N. Dict. Hist. Nat. It resembles a Truffle but grows above ground, and has the roots creeping on the surface, whence the name.

The roots of the following plants are called Tuckahos in the Southern States.

Convolvules panduratus, *C. battatas* and *C. macrorhiza*.

Erythrina herbacea.

Apios tuberosa.

Several Sp. of *Sagittaria* and *Helianthus*.

Eaton has only 2 Sclerotiums, Schweinitz has 22, they are all Tuckahos, although not eatable; but the new Tuckahos are large, edible, subterranean Fungi. See my Med. Flo vol ii. N. G. *Tucahus*. If this name is too barbarous, *Gemmularia* or *Rugosaria*, may be substituted. I shall here describe 4 of them

N. G. *Tucahus* or *Gemmularia*. Raf. Subterranean Fungus, without roots, shape, multiform or amorphous, forming a solid mass, covered by an epidermis with wrinkles or chinks, on which sprout gemmules reproducing the plant.

1 Sp. T. or *G. rugosa*, Raf Oblong mass, inside white, solid, with chinks, outside brown rugose by anastomoted prominent nerves.

Synon. *Lycoperdoides* of Clayton according to Macbride, in Am. M. Mag. N. Y. No. 3, p. 149, who gave a long account of it. He says, that it grows from S. Carolina to Maryland, in all kinds of ground except Swamps; in rich grounds it grows from 15 to 40 lbs weight. When young it is attached to the roots of Oaks and Hickories, but when old is quite free. The inside appears a mass of modified gluten, without starch nor fibrine! The Indians eat it, but it has no smell and little taste. I saw it in 1817 at Dr Mitchill's.

2. Sp. *T. or G. leviuscula* Raf. oblong knobby mass, inside white fungose with chinks, outside fulvous smooth. In Carolina, 6 to 12 inches long, epiderm thin, gemmules small rounded articulated in the hollows. Edible good, inodorous, seen alive.

3. Sp. *T. or G. rimosa* Raf. Mass oblong cuneate one end attenuated, inside white solid without chinks, outside with thick longitudinal flexuose wrinkles and furrows. In Virginia and N. Carol. lately communicated by Dr Mease, who received it from Mr Garnet of Jerusalem. First mentioned as a nameless Truffle by Dr Mitchell Med. Repos. 1812. It grows in rich swamps, has no smell nor taste, but is edible, when fresh a little acrid and astringent, used by Indians for diarrhea. The internal substance has a flexuose breakage, not angular as in the

others. Epiderm thin. 5 to 8 inches.

4. Sp. *T. or G. albida* Raf. Mass rounded whitish, inside white solid without chinks. outside with few chinks, and some short wrinbles. In W. Pensylv. Ohio & Kentucky, deemed a truffle, good to eat. Perhaps this is the *Tuber* of Bosc, but mine had no veins inside, with small gemmules outside. small size 1 to 3 inches.

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137. PLEURADENA COCCINEA. N. G. of Mexican Shrub, from Bartram's Garden.

The Botanical Garden of Bartram received some years ago from Mr. Poinsett our ambassador in Mexico, a fine new green-house shrub, akin to *Euphorbia*, with splendid scarlet blossoms, or rather bracts. It has since been spread in our gardens near Philadelphia, and is known in some as the *Euphorbia Poinseti;* but appears to me to form a peculiar genus or S. G. at least, by the singular lateral mellifluous gland of the Perianthe. It is a fine showy plant, well deserving cultivation; it gives out a white milk like the rest, but the gland exudes a yellow sweet juice.

G. PLEURADENA Raf. Perianthe colored thick sub 8 lobe, on one side is a very large elliptical gland, perforate and mellifluous. Phoranthe wooly, stamens incluse subulate, anthers flat bilocular. Gynophore elongate pendulous, 3 bifid styles, capsule smooth tricocous— *Habit* Shrubby, leaves scattered petiolate, umbel depressed corymbose, surrounded by many large colored bracts.

Sp. *Pl. coccinea.* Raf. Inerme, leaves ovate subangular acute remote, umbel irregular, bracts scarlet lanceolate acute. Flowers subsessile yellow edged with red, gland yellow, blossoms very early in Spring.

If yet deemed an *Euphorbia* it may be called *E. coccinea* or E. *poinseti* Raf. S. G. *Pleuradena*.

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138. OROSPODIAS CORYMBOSA or WILD CHERRY, of Oregon Mountains.

At page 78 of this Journal this New Cherry tree was described and called *Prunus rotundifolia.* Upon a second examination of two trees of it in Washington square when in full bloom at the end of April, I have ascertained that it ought to form a peculiar G. or S. G. between *Padus & Cerasus,* which I therefore call *Orospodias* meaning Mountain Cherry. It differs from both by *flowers in a corymb* or short corymbose raceme rather than fascicle, with bracts at the base. The Calix is campanulate 5 fid, with acute reflex segments. Petals unequal oblong obtuse. If this tree is to be retained with *Prunus* it might be called *Pr. corymbosa,* this name being better than *Pr. rotundifolia,* as all the leaves are not round, but some oval, while the flowers are always corymbose, larger than in *Padus,* but smaller than in *Cerasus,* It differs totally from *Cerasus* by not having the *Calix urceolate,* a striking character of *Cerasus,* omitted by all the authors! altho' it is the best distinction between it and *Prunus.*

INCOMBUSTIBLE ARCHITECTURE,

Or Fire Proof Buildings of all Kinds,

BUILT AS CHEAP

AS ANY COMBUSTIBLE BUILDINGS.

BY C. S. RAFINESQUE,

Professor of many Sciences, Architect, Draftsman, &c.

The constant deplorable loss of property and lives by the conflagration of public and private buildings, and even whole towns all over the United States, calls loudly for a remedy or a change in our style of building.

This remedy is found, and the only objection to a change by the greater expense of fire-proof buildings will be obviated by the discovery that such buildings may be constructed on a new plan quite as cheap as any other common stone and brick buildings. Therefore this new style of *Incombustible Architecture* ought to be immediately adopted for all our new buildings.

Several additional advantages are connected with this new style of Architecture, such as enabling to warm the buildings at one third the usual expense, and to insure them for a mere trifle. Nay, these additional inducements are of such importance that they might of themselves decide to employ this new way of building. At any rate, I am ready to contract to build any edifice or house, for the payment of the saving in fuel and insurance, besides the actual cost in the usual style.

Let us reflect that ever since 1800, the United States have suffered a loss of fifty millions of dollars at least by conflagrations, besides several thousands of lives lost also; with many millions for wasted fuel, insurances against fire, keeping engines, hoses, and firemen.

Let us reflect that all our colleges, libraries, museums, public offices, stores, factories, theatres, &c. are yet liable to be destroyed, with all their contents, records, books, wares, machinery, &c. and judging from what has already happened, they are *all doomed* to be burnt down in succession, and the contents lost.

To render the actual public buildings and houses incombustible may also be accomplished. All the scientific attempts to render wood altogether incombustible in a very great conflagration, have been unavailing, since even bricks will crumble by excessive heat. But my new style of architecture may be partly adapted to actual buildings, so as to render them less liable to conflagrations, and enable them to realize a saving in fuel and insurance that will pay for the extra expense. This I will also undertake to do, by specific contracts.

But it is in the new edifices yearly erecting over all the States, that my new method may be easily and cheaply applied. Thus I will undertake to build or direct the building of new

STATE HOUSES	CHURCHES	ARSENALS
COURT HOUSES	MEETING HOUSES	BANKS
PUBLIC OFFICES	LIBRARIES	WAREHOUSES
COLLEGES	MUSEUMS	HOTELS
ACADEMIES	THEATRES	HALLS
MANUFACTORIES	PRIVATE HOUSES	FACTORIES,

All over the United States, AS CHEAP if not *cheaper* than they would cost, if built in the usual combustible way. And I will insure them when built for 2 or 3 mills in the Dollar per annum, or for one Dollar in 500.

Such buildings will be altogether incombustible, even if the furniture and firewood was set on fire on purpose, and in time of war cannot be destroyed by an enemy unless blown up with gunpowder.

They will be just like any other Houses and Buildings outside, but a little different inside, yet more elegant, simple and convenient. The whole may be or may not be vaulted as required. Nay by some trifling changes in the plan and design of any building, it may acquire this incombustible property.

They will be built by myself as Architect and builder upon the device and estimates of any other Architect. Or if employed as chief Architect, I will enable the builders to perform the needful work inside as cheap.

My terms will be similar to those of other Architects.

I will charge 5 to 10 per cent and travelling expenses if employed as chief architect, but nothing for drafts and estimates. Of this 2 per cent must be paid in advance.

If employed as builder I will build at the same rate as any other builder would for combustible (stone or brick) houses, receiving for remuneration the saving in fuel and insurance for 25 years, one fifth in advance.

To alter any standing house or building and give it this incombustible property, I will charge the actual needful expences to change the inside and roof with the saving in fuel and insurance for 10 years, 2 years in advance, or half of the saving for 25 years.

I have not taken a patent for this discovery, because our actual patent laws give no security against vexatious law suits and heavy expenses, while by keeping secret a discovery it may be made more profitable. This I have found by experience. The difficulty of making models would also be too great. But I will use this discovery as Macadam used his roadmaking in England, and I will teach the art to any architect or builder for $ 1000.

Apply personally or by letter to *C. S. Rafinesque*, Architect, &c. No. 59 North 8th Street, Philadelphia. Letters ought to be post paid unless enclosing remittances. I will not answer any letter asking idle questions; unless a fee is sent; but will immediately attend to orders in the line of this business.

C. S. RAFINESQUE,
Prof. of Hist. & Nat. Sciences.

Philadelphia, 1838.

Directions how to proceed for Applications.

Any house owner who wishes to render his property fire proof, must furnish me with an account or plan of it, with statement of value, fire insurance, age and cost of fuel in it. Whereupon I will furnish the means (or do it myself) to render it incombustible, and at the same time much warmer in Winter and even cooler in Summer.

Those who wish to put up new buildings, public or

private, must furnish a statement of the place, ground, kind of building and what they wish to expend, contemplated size and materials with their cost at the place where it is to be erected. Whereupon if employed as architect I will furnish the needfull plans, elevations and estimates. For which I must be paid as any other architect would be, unless I am allowed a stipulated sum as chief architect, or commission on cost of the whole.

If any other architect has been or is to be employed, he may take all that trouble on himself, I shall merely want a copy of his plans and estimates, whereupon I will state how I can undertake to add the incombustible property by myself or proxy. But no architect is to see my operations nor study my new art unless he pays me, or his employers for him $ 1000.

These Statements ought to be handed to me, or sent me by private conveyance, unless the postage is paid. I recommend to state outside of the letters, *Application for I. A.*

I shall be ready to attend to this business and undertake buildings on the 1st September, 1833. If I receive many distant applications, I will appoint agents whenever it is necessary to attend in person.

RECAPITULATION

Of the warranted advantages of this new style of Architecture.

1. Buildings will be fire proof.
2. They cannot be set on fire on purpose.
3. They cannot catch fire from neighbours.
4. They will last longer.
5. They can be warmed in Winter at 1-3d the actual cost.
6. They will be insured at a mere trifle.
7. They will be warmer in Winter.
8. They will be cooler in Summer.
9. They will require no expense of fire engines and firemen.
10. They will save the lives of 100,000 persons doomed to be burnt alive.
11. They will save 100 millions of dollars of property doomed to be burnt.
12. They will look neater and more convenient inside with more space, &c. &c.

And all this may be done AS CHEAP or cheaper!!!